

New model of mobile learning for the high school students preparing for the unified state exam

Khasianov A., Shakhova I.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2017. In this paper we study a new model of mobile learning for the Unified State Exam (USE) preparation in Russian Federation. USE - is the test school graduates need to pass in order to obtain Russian matura. In recent years the efforts teachers put for preparation of their students to the USE diminish how well the subject is actually mastered by the students. The problem lays in the key performance indicators the teachers must reach. The KPI is not unified across the country, but often it includes, in one or another form, the USE score the students get. The main proposition of this research is to use gamification in order to transfer the USE preparation out of the classroom activities. The most natural platform for this gamification is the ecosystem of the smartphones and social media available to the students. We build the USE preparation didactical model that addresses the challenges the teachers currently have. Then we discuss the architecture and the implementation for the whole solution.

Keywords

Education, Education technology, Mobile learning, Pedagogy, Software engineering, Unified state exam

References

- [1] Anderson, J.R. et al., 1995. Cognitive tutors: Lessons learned. *Journal of the Learning Sciences*, 4(2), pp. 167-207.
- [2] Astin, A.W., 1993. What matters in college? Four critical years revisited. Jossey-Bass, San Francisco, CA.
- [3] Atkinson, J., 1964. An introduction to motivation. Van Nostrand, Princeton, NJ.
- [4] Bonk, C.J. et al., 2006. The Handbook of Blended Learning: Global Perspectives, Local Designs. Pfeiffer Publishing, San Francisco, CA.
- [5] Butler D. and Winne P., 1995. Feedback and Self-Regulated Learning: A Theoretical Synthesis. *Review of Educational Research*, Vol. 65, No. 3, pp. 245-281.
- [6] Cardelle, M. and Corno, L., 1981. Effects on second language learning of variations in written feedback on homework assignments. *TESOL Quarterly*, 15(3), pp. 251-261.
- [7] Carey, B., 2014. How we learn: The surprising truth about when where and how it happens. Random House, NY.
- [8] Khasianov, A. et al., 2016. Gamification in higher education: Kazan Federal University primer. *Proceedings of the 12th International Scientific Conference eLearning and Software for Education*. Bucharest, pp. 519-522.
- [9] Khasianov, A. et al., 2017. Three agent platform approach for digital education environment. *Proceedings of the 11th annual International Technology, Education and Development Conference* (to appear).

- [10] Lee, J. J. and Hammer, J., 2011. Gamification in Education: What, How, Why Bother? *Academic Exchange Quarterly*, 15(2), pp. 146-150.
- [11] Rothkopf, E.Z. and Billington, M.J., 1979. Goal-guided learning from text: Inferring a descriptive processing model from inspection times and eye movements. *Journal of Educational Psychology*, 71, pp. 310-327.
- [12] Salen, K. and Zimmerman, E., 2003. *Rules of play: Game design fundamentals*. MIT Press, Cambridge, MA.
- [13] Sprague, J. and Stuart, D., 2000. *The speakers' handbook*. Harcourt College Publishers, Fort Worth, TX.
- [14] Suleymanov, D., 2011. Methodology and principles of the intelligent agent design for the textual dialogue systems. *Proceedings of System analysis and semiotic modelling*, pp.31-37.
- [15] Suleymanov, D. et al, 2016. Education looking to the future. Socio-cognitive study of youth media and computer technology education. The Academy of Sciences of Republic of Tatarstan Press, Kazan, Russia.
- [16] Vygotsky, L.S., 2005. *Psikhologiya razvitiya cheloveka*. Moscow: Eksmo (in Russian).